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### In the United States Patent & Trademark Office

In re Patent of  
Steven W. Michell et al.  
Patent No: 5,946,995

April 14, 2004

Issued: September 7, 1999

For: Method and Apparatus for Curve Sawing or Traverse Edging With an Active Sawbox

### SUBMISSION OF PRIOR ART UNDER 37 CFR 1.501

Hon. Commissioner for Patents  
U.S. Patent and Trademark Office  
2011 South Clark Place  
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Arlington, VA 22202  
USA

Hon. Commissioner:

The undersigned herewith submits in the above identified patent the following prior art, including copies thereof, which is pertinent and applicable to the Michell et al. patent and is believed to have a bearing on the patentability of claims 1 and 14 thereof:

#### The IDC Publication, 1989

"Electric Linear Actuators & Controls", by author unknown, Published by Industrial Devices Corporation, Novato, California, 1989.

This document discloses linear actuators and controls therefor for precisely controlling the position and movement of machine elements. On the introduction page in particular, it is taught that these linear actuators are compatible with computers and programmable controllers and are ideal for programmed manufacturing systems. The D Series In-line Configuration cylinders described in this publication are similar to the Temposonic <sup>TM</sup>

cylinders illustrated as (56a - 56d) in FIG. 3 of the Michell et al. patent. The D Series In-line Configuration cylinders are also similar to the cylinders on the networks of Cannaday. The controls described in this documents have the capability to control the position, velocity, acceleration, and deceleration of the machine element attached to one of the mentioned linear actuators.

It is believed that this document has bearing on the patentability of claims 1 and 14 of the Michell et al. patent.

**US 2,149,235** issued to **C. Stone** on February 28, 1939

This patent discloses a networks for sawmill edgers, comprising saw guides mounted on individual guide rods extending parallel to the saw arbor.

**US 3,093,168** issued to **V.L. Colt et al.** on June 11, 1963.

This document discloses a networks for sawmill edgers. The saw guides are positioned by linear actuators. Electrical sensors are provided to monitor the position of the saw guides. If one saw guide is moved, the other saw guides are automatically adjusted to maintain a preset spacing between the saws.

It is believed that this document has bearing on the patentability of claims 1 and 14 of the Michell et al. patent.

**US 3,742,796** issued to **J.R. McMillan** on July 3, 1973.

This document discloses a mechanism to move a cluster of saws along the arbor of an edger. One of the saws in the cluster is referred to as a boss saw. The axial movement of the boss saw moves the whole cluster without alteration of spacing between the saws, such that all the saws move in unison. For this purpose, the linear actuators are interconnected by tie bars (enclosing the ends and sides of the actuators, not labeled).

It is believed that this document has bearing on the patentability of claims 1 and 14 of the Michell et al. patent.

**US 4,188,544** issued to **L.H. Chasson** on February 12, 1980.

This document discloses an edger system for scanning a 3-dimensional workpiece and for controlling a pair of saws. (Col. 5, lines 16-19) "The arrangement permits scanning of stationary boards or those moving both transversely and longitudinally with respect to the board's major axis". (Col. 6, lines 4-6) "The control signals will typically include an instruction as to saw position, and in some cases, saw angle". (Col. 8, lines 10-16) "The data processor outputs are lateral dimension commands to the saw controls, causing the saw blades to move laterally so as to cut in accordance with the data processor's computation of the optimum cutting solution". (Col. 10, lines 3-6) "The invention thus described provides for the continually accurate sensing of workpieces in a scanning system and the continually

accurate processing of workpieces in a workpiece processing environment". In FIG. 8, the saws are guided for lateral movement along the shaft. The teachings at Col. 5, suggests that the board is not aligned along the axis of the edger, but can be skewed, and consequently, the document suggests that the saw spacing is translated in unison along the shaft as the board moves through the edger.

It is believed that this document has bearing on the patentability of claims 1 and 14 of the Michell et al. patent.

**US 4,359,677** issued to J.D. **Dennon** on November 16, 1982.

This document discloses an electrically-operated linear actuator for adjusting saw guides or other sawmill machine elements.

**US 4,475,422** issued to K.T. **Lawson** on October 9, 1984.

This document discloses a machine for cutting strip of material. The machine has a pair of cutters mounted on a base that is pivotally mounted on a sub-base. The cutters are movable angularly about a vertical axis and sideways across the path of the strip of material to be cut. Both cutters are movable in unison to cut curves and straight lines according to a computer-generated profile, as illustrated in FIG. 4. The patent describes a method to maintain both cutters parallel during steering. This patent is classified in class and subclass 83/368, entitled: Cutting; Positioning of Tools Controlled by Detector Means Responsive to Work". The Michell et al. patent is also classified in the same classification. Therefore, it is respectfully submitted that this patent is applicable prior art.

It is believed that this document has bearing on the patentability of claims 1 and 14 of the Michell et al. patent.

**US 4,702,134** issued to A.J. **Corley III** on October 27, 1987.

This patent discloses the use of a Temposonic<sup>TM</sup> saw servo positioner (60) to position the saws in an edger. (col. 7, lines 48-51, and FIG. 6).

**CA 567,994** issued to P.N. **Bland** on December 23, 1958.

This document discloses a networks for sawmill edger comprising parallel rigid saw guides mounted to a plurality of rods that are parallel to the saw arbor. The rods are actuated by hydraulic cylinders.

**CA 652,235** issued to G. F. **Scheelke** on November 13, 1962.

This document discloses a networks for sawmill edger. The networks comprises parallel rigid saw guides mounted to a plurality of rods, that are themselves parallel to the saw arbor.

Not all the documents cited above have been associated with one or more specific claims of the Michell et al. patent. These additional documents are nonetheless submitted herewith to determine

a level of ordinary skill in the art of certain aspects of the Michell et al. method and apparatus. In that regard,

the **Stone, Bland and Scheelke** patents are submitted herewith to show that the structure of a networks for sawmill edger, wherein this structure comprises parallel rigid saw guides mounted on guide rods that are parallel to the saw arbor and are actuated by linear actuators, is well know in the art.

Similarly, the **Dennon and Corley III** patents are submitted herewith to show that the positioning of saw guides using a computer and a Temposonic™ or a similar servo-actuator is also a method and a system that are well known in the art.

The prior art listed above was not of record in the file of the Michell et al. patent. These prior art references disclose various features claimed in the Michell et al. patent. It is believed that should these references had been of record at the time the Michell et al. application was examined, the claims 1 and 14 of the Michell et al. application would have been rejected for being obvious to the person of ordinary skills in the art.

Therefore the prior art listed above is considered relevant prior art printed publication applicable to the Michell et al. patent.

Respectfully submitted,



MarioTheriault, P.Eng.

Reg. no. 40,368

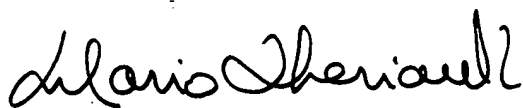
Patent Agent

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I hereby certify on this 14th day of April 2004, that a true and correct copy of the foregoing  
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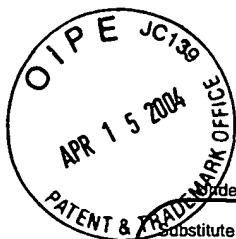
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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

<b>Patent</b>	5,946,995
<b>Filing Date</b>	Sept. 9, 1997
<b>First Named Inventor</b>	S.W. Michell
<b>Art Unit</b>	3725
<b>Examiner Name</b>	W. Donald Bray
<b>Attorney Docket Number</b>	24098

Sheet two of two

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		<b>"Electric Linear Actuators &amp; Controls", by author unknown, Published by Industrial Devices Corporation, Novato, California, 1989.</b>	

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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